



# **Regional Sustainability for the Sacramento Valley**

**June 19, 2012**



# Sacramento Valley –

**A truly unique and exceptional place**





# The Sacramento Valley

*Like a human fingerprint, California's Sacramento Valley is truly unique. On the leading edge of ecological and economical sustainability, it's also an **exceptional** place to live, work and raise a family.*

*The Sacramento Valley joins together a world renowned mosaic of natural abundance: productive farmlands, wildlife refuges and managed wetlands, cities and rural communities, and meandering rivers that support and feed fisheries and natural habitats.*

*Through **efficient** management of the region's water resources, the Sacramento Valley will continue to provide what's **essential** to California's future success and prosperity. Nourishment and sustenance from the fields, habitats for fish and wildlife, recreation and a special quality of life—the Sacramento Valley is home to all of this, and more...*



# Sacramento Valley

Several million acres of **family farms** that provide the economic engine for the region through the production of rice, trees, and various row crops that serve as a working landscape and pastoral setting and provide valuable habitat for waterfowl along the Pacific Flyway.





# Sacramento Valley

A close-up photograph of a steelhead trout in mid-jump, emerging from dark, rippling water. The fish's body is silvery with a hint of pink on its side, and its tail is clearly visible as it cuts through the air. The background is a blurred mix of yellow and brown, suggesting a natural river environment with rocks and vegetation.

Habitat for 50% of  
the *threatened*  
*and endangered*  
species in  
California,  
including the  
winter-run and  
spring-run salmon,  
steelhead and many other fish species.

# Sacramento Valley

**Six National Wildlife Refuges**, more than fifty state **Wildlife Areas** and other privately managed wetlands that support the annual migration of waterfowl, geese and shore birds in the Pacific Flyway. These seasonal and permanent wetlands provide 65% of the North American Waterfowl Management Plan objectives;



# **Pacific Flyway -Waterfowl and Wildlife Improvement Programs**

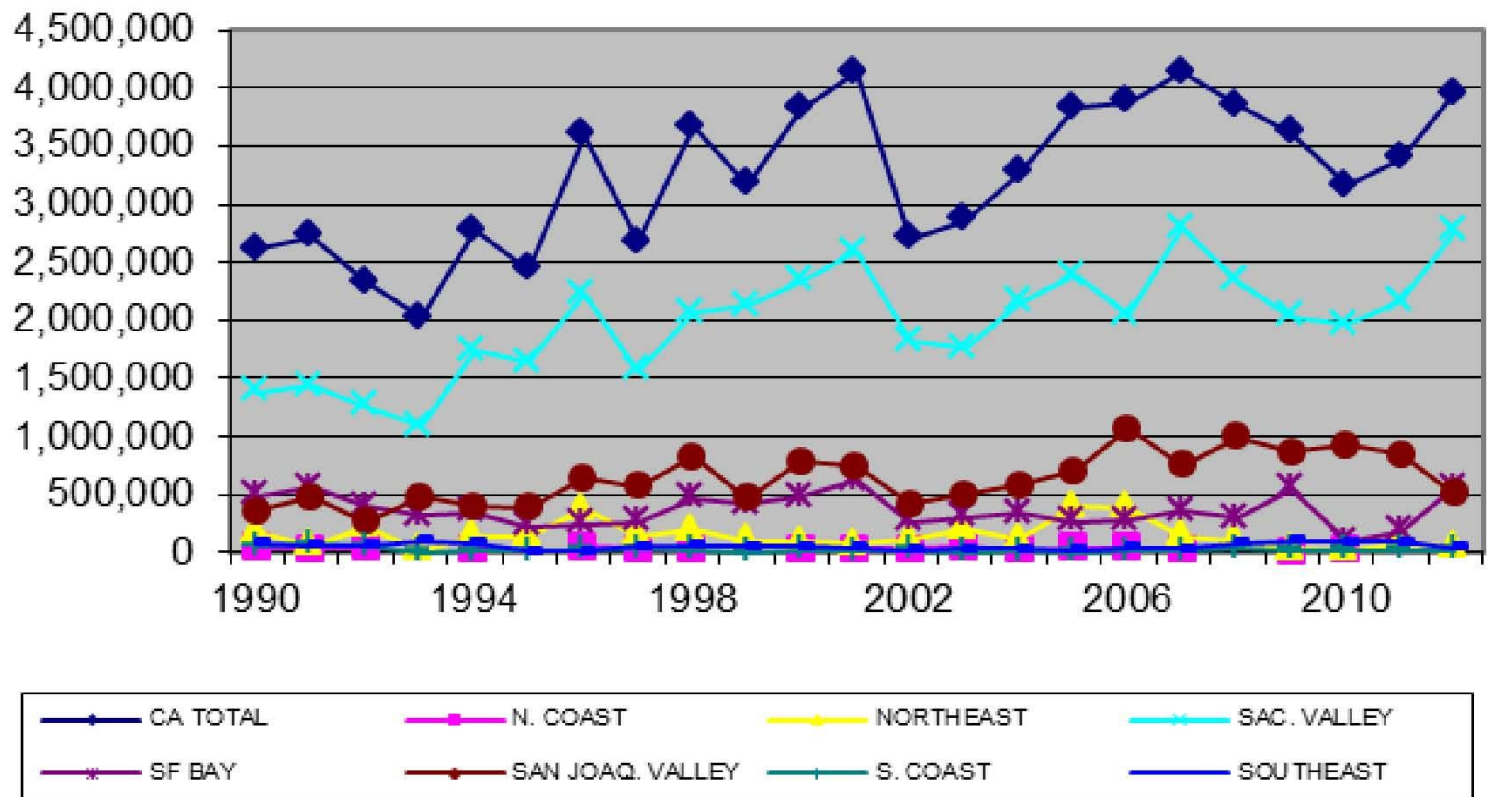
- **Resource of international significance**
- **Assure water for ricelands, refuges**
- **Promote Joint Habitat Venture**

**[www.centralvalleyjointventure.org](http://www.centralvalleyjointventure.org)**





## California Mid-winter Waterfowl Survey - Total Ducks



Mike Wolder, Supervisory Wildlife Biologist  
Sacramento National Wildlife Refuge Complex



# Sacramento Valley

The **small towns and rural communities** that form the backbone of the region, as well as the **State Capital** that serves as the center of government for the State of California.



# **Sacramento Valley**

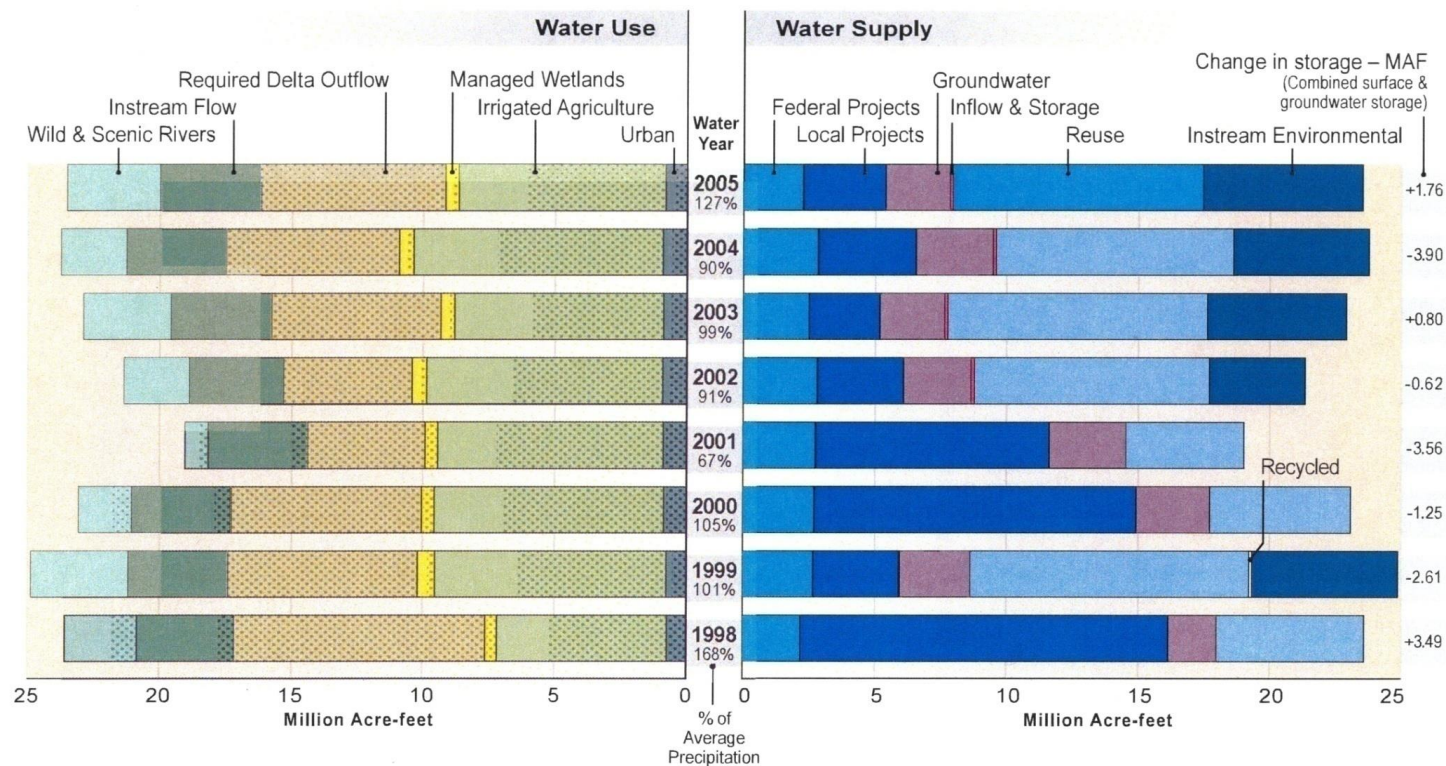
**The forests, meadows and  
canyons in the **watersheds** of  
the Sierra Nevada and Coast  
Range.**





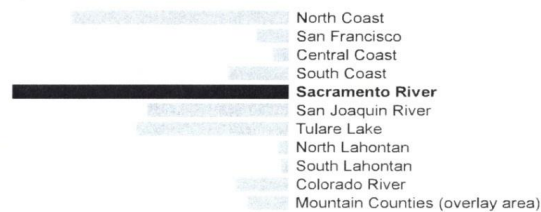
# A Region in Balance

**Figure SR-2 Sacramento River Hydrologic Region water balance summary, 1998-2005**



Stippling in bars indicates depleted (irrecoverable) water use (water consumed through evapotranspiration, flowing to salt sinks like saline aquifers, or otherwise not available as a source of supply)

## Comparison of 2005 total water use



25 MAF

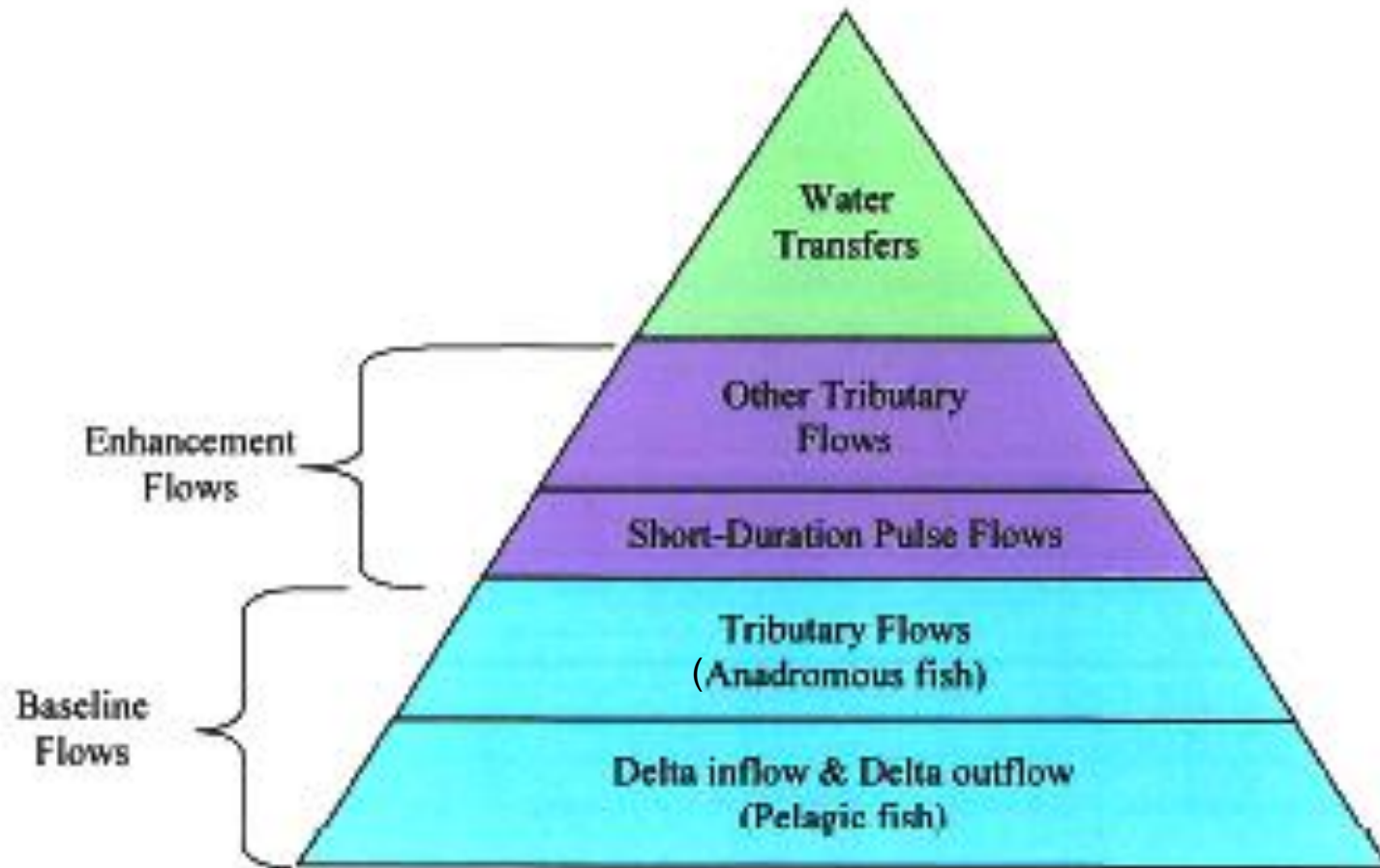


# Stressors

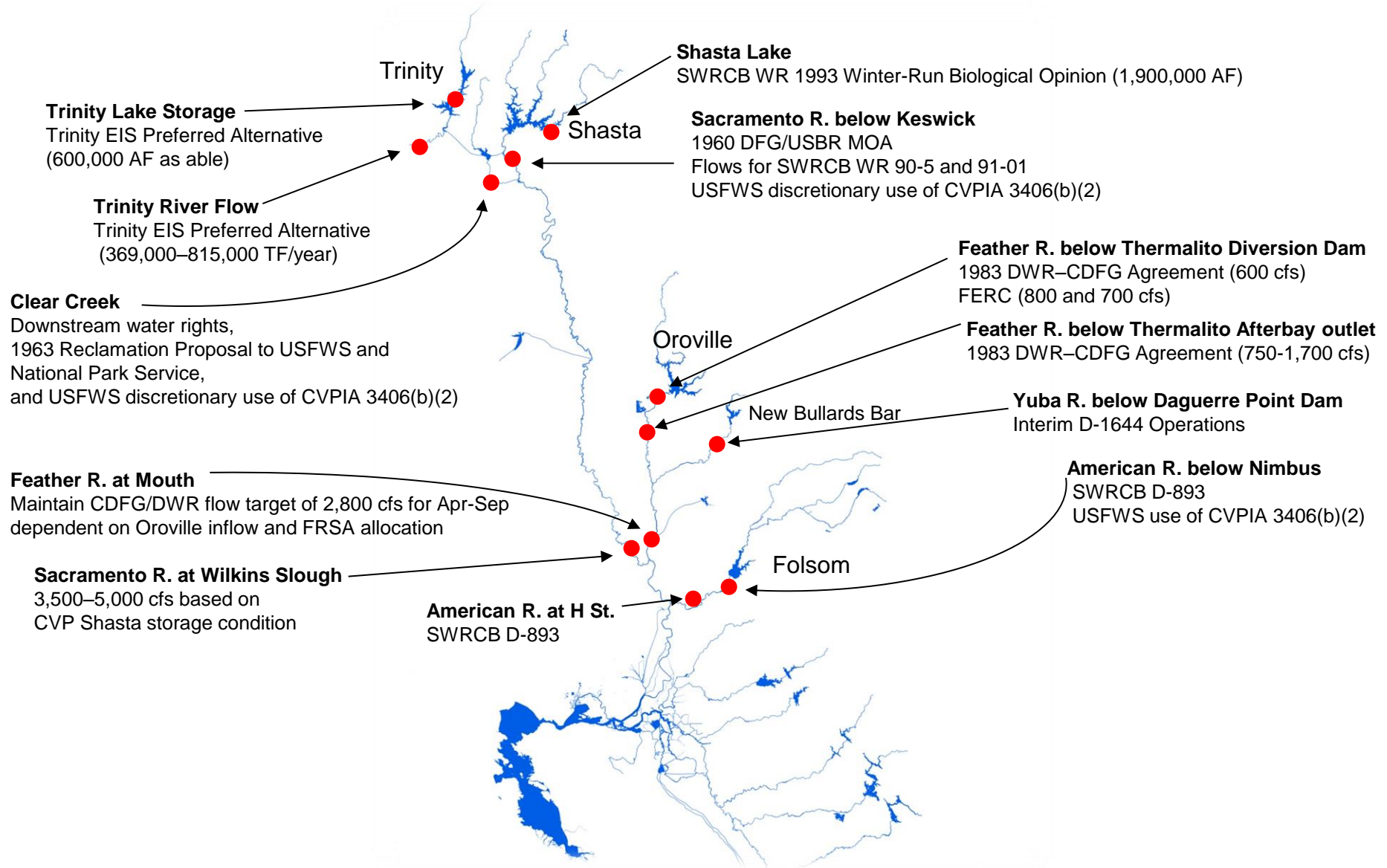
- Contaminant loading
- Fisheries management (both harvest and hatcheries)
- Flow management
- Invasive species
- Loss/alteration of physical habitat



# State of the Art Instream Flows



# North of Delta Flow Criteria





# **State of the Art Instream Flows**

- **This suite of flow regimes provide a strong foundation for sustainability in the Sacramento Valley**
- **The plan addresses each of the stressors and will preserve and enhance all of the beneficial uses of water within the Bay-Delta watershed**



# Accounting for every drop. Water management in the Sacramento Valley.

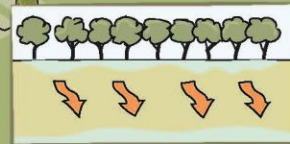
In the Sacramento Valley, a highly efficient "flow-through" system allows water to move from mountains to ocean. Water resources managers work with the Valley's unique topography, geology and hydrology to gather, use and reuse this precious resource.

This system is the heart of the Valley's healthy ecosystem, diverse economy and rich recreational opportunities.

Rice is grown on dense clay soil which prevents seepage and ensures water is available for re-use downstream.



The water not used in one district is a source of water for others downstream.



All water not used by crops and wetlands returns to the river or percolates down to groundwater, recharging Valley aquifers.

This flow-through system works well. Natural vegetation, birds, fish, crops and people require a portion. The rest flows to the delta.



The Sacramento River and its tributaries are the prime sources for this system. They also gather water from irrigation and wetlands to reuse downstream.

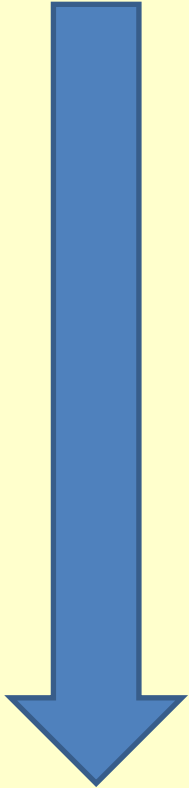
Information compiled by  
Northern California Water Association and  
California Rice Commission.  
[Facebook.com/SacValleyCA](https://www.facebook.com/SacValleyCA)

Active management of the Sacramento Valley's flow-through system ensures that the water we need and the benefits we enjoy will continue to be available.





# Sacramento River Coordination

<b>Upstream</b>  <b>Downstream</b>	<b>Maximize cold water storage and management.</b>
	<b>Improve spawning habitat below reservoirs.</b>
	<b>Manage cold water downstream of reservoirs with a fluctuating temperature control point.</b>
	<b>Maintain constant flows downstream of reservoirs to insure proper spawning habitat and avoid stranding.</b>
	<b>Based on water year type, manage fish attraction flows appropriately.</b>
	<b>Identify common release dates from all hatcheries north of the delta. Time with natural flow events and additional pulse flows.</b>
	<b>Identify pulse flow needs based on release requirements.</b>
	<b>Coordinate with water users to reduce diversions during pulse flows.</b>
	<b>Coordinate delta operations for pulse flows, close cross channel gate and reduce exports.</b>

# **Proposed SWRCB Process**

- **Focused Synthesis**
- **June 2014 – Water Quality Control Plan Update**
  - **Objectives**
  - **Program of Implementation**



